

## IN THE CLAIMS

1. (currently amended) Low expansion transparent glass-ceramics obtained by heat treating a base glass produced at a melting temperature of 1530° or below, said glass-ceramics comprising RO, where R is Mg, Ca, Ba, Sr or Zn, in a total amount of 6 - 25 mass% on the basis of total oxides and wherein said ceramic contains 0.5 – 2 mass% of CaO, 3.5[[[%]]]-6 mass% TiO<sub>2</sub> and 0.5 [[[%]]]- 2mass%MgO on the basis of the amount of total oxides, said glass-ceramics being free of P<sub>2</sub>O<sub>5</sub>, and having an average linear thermal expansion coefficient ( $\alpha$ ) within a range from  $+6 \times 10^{-7}/^{\circ}\text{C}$  to  $+35 \times 10^{-7}/^{\circ}\text{C}$  within a temperature range from 100° to 300° and having 80% transmittance wavelength (T<sub>80</sub>) of 700nm or below.
2. (original) Low expansion transparent glass-ceramics as defined in claim 1 wherein internal transmittance for a plate having thickness of 10mm is 75% or over at light wavelength of 1550nm.
3. (original) Low expansion transparent glass-ceramics as defined in claim 1 having a heat resisting temperature of 800°C or over.
4. (original) Low expansion transparent glass-ceramics as defined in claim 1 having Young's modulus of 90 GPa or over.
5. (original) Low expansion transparent glass-ceramics as defined in claim 1 containing  $\beta$ -quartz or  $\beta$ -quartz solid solution as a predominant crystal phase.
6. (original) Low expansion transparent glass-ceramics as defined in claim 1 containing 1.5% - 3.5% Li<sub>2</sub>O in mass % on the basis of amount of total oxides.

7. (original) Low expansion transparent glass-ceramics as defined in claim 1 wherein amount of eluting lithium ion is less than  $0.0050\mu\text{g}/\text{cm}^2$ .

8. (canceled)

9. (canceled)

10. (currently amended) Low expansion transparent glass-ceramics as defined in claim 1 containing ZnO in a larger amount than other RO ~~oxide~~ ingredients in mass % on the basis of amount of total oxides.

11. (canceled)

12. (currently amended) Low expansion transparent glass-ceramics as defined in claim 1 containing a total amount of R'O ingredients,  $[(\text{R}')]_{\text{oxide}}$  where R' is Mg, Ca, Ba or Sr of 3.5 % - 13% in mass % on the basis of amount of total oxides.

13. (currently amended) Low expansion transparent glass-ceramics as defined in claim 1 comprising in mass % on the basis of amount of total oxides:

SiO <sub>2</sub>	50 – 65%
Al <sub>2</sub> O <sub>3</sub>	20 - 30%
MgO	0.5 - 2%
CaO	0.5 - 2%
SrO	0 - 10%
BaO	1 - 5%
ZnO	0.5 - 15%
Li <sub>2</sub> O	1.5 - 3.5%
TiO <sub>2</sub>	<u>3.5</u> - 6%
ZrO <sub>2</sub>	1 - 5%
Nb <sub>2</sub> O <sub>5</sub>	0 - 5%

$\text{La}_2\text{O}_3$	0 - 5%
$\text{Y}_2\text{O}_3$	0 - 5%
$\text{As}_2\text{O}_3$ and/or $\text{Sb}_2\text{O}_3$	0 - 2%.

14. (canceled)

15. (canceled)

16. (canceled)

17. (canceled)

18. (canceled)

19. (canceled)

20. (canceled)

21. (canceled)

22. (canceled)

23. (canceled)

24. (canceled)

25. (canceled)

26. (canceled)

27. (canceled)

28. (canceled)

29. (canceled)

30. (canceled)

31. (canceled)

32. (canceled)

33. (canceled)

34. (canceled)

35. (canceled)

36. (canceled)

37. (canceled)

38. (canceled)

39. (canceled)

40. (canceled)

41. (canceled)

42. (canceled)

43. (previously presented) Low expansion transparent glass-ceramics obtained by heat treating a base glass produced by melting oxides at a melting temperature of 1530° or below, said glass-ceramics being free of  $P_2O_5$  and having an average linear thermal expansion coefficient ( $\alpha$ ) within a range from  $+6 \times 10^{-7}/^{\circ}C$  to  $+35 \times 10^{-7}/^{\circ}C$  within a temperature range from 100° to 300° and having 80% transmittance wavelength ( $T_{80}$ ) of 700nm or below said oxides being selected from the group comprising in mass % on the basis of the amount of total oxides:

$SiO_2$	50 – 65%
$Al_2O_3$	0 - 30%
$MgO$	0.5 - 2%
$CaO$	0.5 - 2%
$SrO$	0 - 10%
$BaO$	1 - 5%
$ZnO$	0.5 - 15%
$Li_2O$	1.5 - 3.5%
$TiO_2$	3 - 6%
$ZrO_2$	1 - 5%
$Nb_2O_5$	0 - 5%
$La_2O_3$	0 - 5%
$Y_2O_3$	0 - 5%
$As_2O_3$ and/or $Sb_2O_3$	0 - 2%.